ORCHARD PLANTING DIRECTIONS

FOR IRRIGATED SECTIONS

MAILED FREE ON REQUEST

The rule is, men in the irrigated sections have sense and use it; they do things and are unafraid.

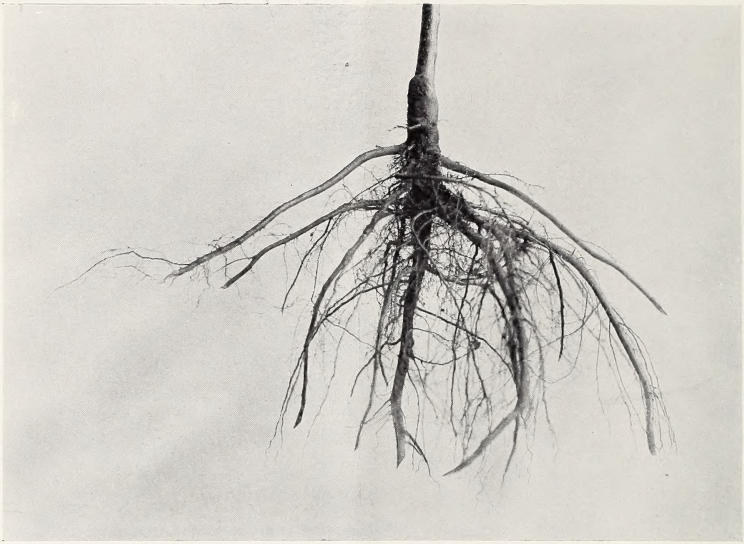
These directions are for busy folks; they are short and plain; they are suited for first-class trees, whether Sammy Smith's, Billy Stark's, yours or mine.

I wish to acknowledge help from the following well known fruit growers in preparing this pamphlet:

MR. J. J. BRIDGES . . . Palisade, Colorado
MR. A. L. ROBERTS . . . Paonia, Colorado
MR. J. D. HAWKINS . . . Paonia, Colorado
DR. A. E. MILLER . . . . . Delta, Colorado
MR. C. T. RULE . . . . . Paonia, Colorado
MR. GEO. H. MERCHANT . Paonia, Colorado
MR. WENDELL PADDOCK . Columbus, Ohio
(Formerly Fort Collins, Colorado)
Also MR. J. H. BAIRD, Superintendent of the Hale Orchard, Fort Valley, Ga., probably the largest and most successful peach orchard in the world.

HERBERT CHASE

Chase Trees DELTA, COLORADO



No. 1.
ROOTS OF THE BEST TREE AS IT COMES FROM THE NURSERY. THE TRUNK IS A STRAIGHT, STRONG WHIP, A LITTLE MORE THAN FOUR FEET IN HEIGHT, AND HAS LIVE BUDS ALONG ITS ENTIRE LENGTH.

No. 2.
ROOTS SHOWN ON OPPOSITE PAGE PROPERLY PRUNED FOR PLANTING. THE ROOTS HAVE BEEN SHORTENED TO EIGHT TO TEN INCHES. ALL ARE CUT WITH A SLANT ON THE UNDER SIDE SO THAT THE CUT SURFACES WILL LIE DOWN.

THESE ILLUSTRATIONS ARE OF APPLE TREES. In a general way these directions apply to all hardy fruit trees except Cherry, which should not be pruned as heavily. Peach Trees require a little different treatment, which is noted.

The Best Tree is a Strong, Straight Whip, **one year old, with live buds all down the trunk.**

No. 3.

No. 3.—The tree properly planted. Pruning should begin at time of planting.

No. 4.

No. 4.—The same tree six months later. Twelve branches were developed, measuring 261 inches; no limbs were removed or pinched off. The tree had the benefit of all leaves it could support, which helped to develop more roots, thus the tree received all the nourishment provided by nature. It grew vigorously, making the very best orchard tree it is possible to have.

During the first summer's growth, do not remove a leaf or branch, unless vigorous branches are sent out close to the ground, and the upper branches to be used for scaffold limbs, are weak; in which case, pinch the tips out of the lower branches when they are 8 to 10 inches long, which will throw the growth where it is wanted. Every leaf gives the tree added strength, and helps it to become firmly established in the ground. If limbs grow where they are not wanted, let them alone until pruning time the following winter.

Tree on opposite page, after the top was pruned, ready for the second year's growth. Five limbs were left, but many orchardists would remove limbs No. 1 and 2, leaving only three scaffold limbs. I show five scaffold limbs because many wish to leave five. This shows how to leave five, or three limbs, as you prefer. On account of spraying, I think three limbs best.

Note thickness of the trunk.

"When planting one-year-old apple trees, there is little likelihood of getting trees that are forked, but in older stock, some of the trees will be forked, with the two leaders of nearly the same size. If trees of that sort are planted they will usually result in one of the limbs being split off when it is loaded with fruit."
—*E. H. Favor, in the Fruit Growers' Guide Book.*

PEACH. A tree 3 to 4 feet tall which will have a few side limbs and some buds along the trunk is best. Peach trees 4 to 6 feet tall are not as good because the branches are too high for scaffold limbs and there are no buds on the trunk where scaffold limbs are wanted.

Cut off the main stem about 20 inches above the ground; there is no ironclad rule. I think 20 inches best.

If side branches are left, cut them off smooth close to the main stem, leaving a straight whip. The tree will develop all the side branches you want, and some to spare.

At the end of the first season's growth. Prune, leaving 3 or 4 branches as will be most evenly distributed around the tree, for scaffold limbs. Cut these off about 12 inches from the main stem. The lower scaffold limb should be 5 to 8 inches above the ground. The upper one near where the top was cut off at the time of planting.

I wrote six well-known successful Colorado peach growers asking the following questions:

1. How high above the ground do you cut off the top?

   Answers: Three, "18 inches." Three, "20 inches."

2. If there are side limbs left, how near the main stem do you cut them? Do you leave one or two eyes, or cut to a switch?

   Answers: One, "Leave one eye." One, "Leave two or three eyes." Four, "Cut to a switch."

3. If no side limbs are left, will the tree develop as many side limbs as you want?

   Answers: All, "Yes."

4. When pruning to go into the second season's growth, how many scaffold, or side limbs, do you leave?

   Answers: One, "Four or five." Two, "Three or four." Three, "Three to five."

5. When pruning to go into the second season's growth, how near to the main stem do you cut these scaffold limbs off? i. e., how long a scaffold limb do you leave?

   Answers: Two, "12 to 18 inches." One, "2 to 3 feet." Three, "Cut off ⅓ to ½ previous season's growth."

Because the answers do not agree, because the variation is slight, it shows that every man knows his business and all are right.

Mr. C. T. Rule, Paonia, wrote:

"You omit one of the most important questions: number of trees per acre. Advise growers to plant less trees on an acre. Peaches need more sunlight, and it is a proven fact here that orchards where the trees are 20 feet apart, produce as many boxes as the closer planted, and much better trees and finer fruit."

I sent the same questions to J. H. Baird, Superintendent of the Hale Orchards. His answers were:

1. "Cut off at 18 inches."

2. "Cut close to main stem, leaving switch."

3. "Yes."

4. "Three is the proper number. Four could be accepted; never more."

5. "⅓ to ½ season's growth."

He adds:

"I believe firmly in low, open headed trees. Most people get too much wood and too much fruit for best financial results."

I asked his opinion on Rule's suggestion. He said, "Rule evidently knows his business. He is absolutely right."

Mr. Baird, the son of a New Jersey nurseryman, was selected by Mr. Hale on account of his efficiency, his knowledge of trees, etc.

THE SUCCESSFUL GROWING of an orchard depends on doing a few simple things; understand, DOING 'EM.

There is no secret, no mystery, no difficulty, but you must DO THINGS.

Trees fail or die through ignorance or neglect.

Newly planted trees start their buds from food nature stored within the tree while it was growing in the nursery.

You must prune before planting, then plant so that nature can supply more food, (through the roots and leaves) to support the newly started buds and give additional growth.

Do not plant when there is frost in the ground or in the air. If a hard freeze comes after the tree has been planted, no harm is done, but that tree if well planted, will grow off earlier, faster, and make a better tree than if it had been planted later in the season.

IT IS IMPOSSIBLE TO PLANT WELL with all the roots and all the tops left on the tree as it comes from the nursery.

ROOTS. Fine hairy roots are feeders. They slough off and new feeders grow from the ends of the larger roots. Therefore, cut most of the fine roots away. If the long roots are not properly pruned, they will be cramped, will mold and rot off. Under these conditions, the tree must heal and recover; must "get over it" before it can attend to business and grow. Shorten all to 8 to 10 inches; use a sharp knife and cut with a slant on the under side as shown in Picture No. 2, so that the cut surfaces will lie down. The cuts will heal quickly; will begin callousing at once and will send out the feeding roots promptly.

There will be no decay, no mold, no sickness, everything ready for business. If roots are broken, ragged or bruised, cut them off; if they remain they will mold or rot off, which weakens the tree.

TOP. If part of the top is not cut away, leaves will start out over the entire top; roots are not yet established to feed those leaves. The tree will struggle for life and will probably starve; if it does pull through, it makes only a weak growth.

"The hole should be large enough to let the tree stand two or three inches deeper than it was in the nursery. The tree in position, fine top-soil is pushed back in the hole and worked in about the roots. With the roots well covered with fine soil and the top-soil slightly tramped, the water is turned into the furrow. After a thorough watering, fresh soil is thrown about the tree, and the furrow is left open for a second watering ten days or two weeks later."—*Fruit Growing in Arid Regions, p. 52.*

As soon as planted, cut the top off to desired height. Do not wait. If the top is left, it exhausts the moisture and strength from the body and root of the tree. If you have not decided on the height, make it 32 inches. (See Picture No. 3.)

At time of planting and two or three years afterwards, trees are pruned to give them the proper shape for bearing regular and heavy crops; to carry those crops well; to enable spraying to be done effectively, etc., etc. When the trees reach bearing age, they are pruned for the purpose of enabling them to produce fruit of superior color, size and quality.

"THE WORK OF PRUNING should start at the time the tree is planted in the orchard. This is a ctitical time in the life of the tree and neglect of pruning at that time influences the tree during its remaining years."—*E. H. Favor, in the Fruit Growers' Guide Book, p. 181.*

DO THESE THINGS

1. Prune roots as shown by Picture No. 2.
2. Prune tops as shown by Picture No. 3. For this pruning use a sharp knife.
3. Be earnest.
4. Have faith.
5. Go by the book.
6. Know you are doing your work well, and fear not.

Cross-Pollination
Distances for Planting
Pruning Trees of Bearing Age, Etc.

I am not well enough informed on these questions to give directions for irrigated sections. For two years I have been gathering information; am still at it. I will not print ready-made directions; neither of us has time for idle words; you want plain talk with a meaning; I hope to be able to make such talk within a year.

HERBERT CHASE

Delta, Colorado
Spring, 1912